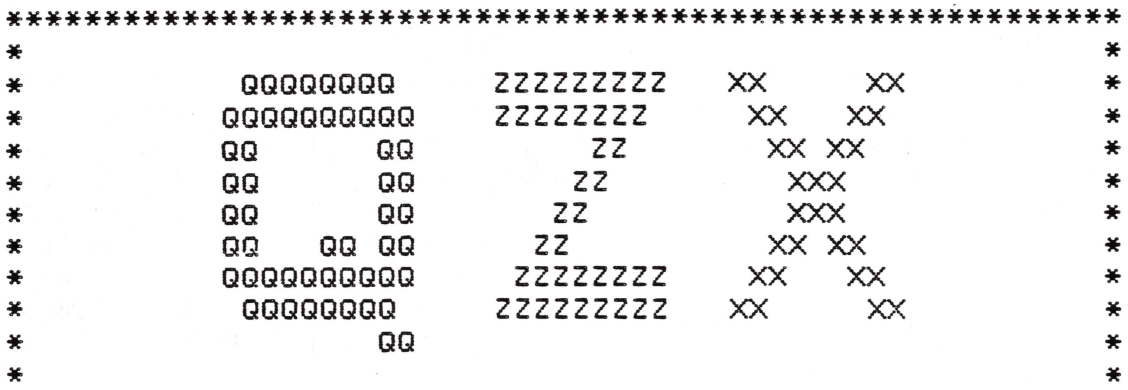

The Journal Covering Amateur Radio & Sinclair Computers
ZX-80; Micro-Ace; ZX81; T/S 1000, 1500, & 2068; QL
Alex. F. Burr, K5XY, Publisher
2025 O'Donnell Drive
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88001

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EDITOR'S NOTES
K5XY

I miscalculated the amount of material I took to the printer on the last issue. I had one page too many. Because I was out of town when they printed it, they could not call my attention to the error; so they did the best they could and printed the extra page. As a result the back of that extra page had to be blank. I waited for a dry day to mail the issues to the USA and just had to pay the extra postage for those addresses which required an envelope. (Fortunately most days are dry in New Mexico so the issue was not delayed by my mistake.)

The ZX81 programs did not make it into this issue, perhaps next time. The cartoon was drawn by the son of LU8MAD.

I have included some notes on a new national Sinclair Users group that is forming. I am not sure that it will make it, but QZX will join as a users group. It is just possible that it may be useful as a distributer of public domain software. If it does, that will be a way of getting our ham programs to the individual user without having to type the often complicated programs in by hand. QZX will keep you informed of the group. If individuals want to join, see the article on SNUG.

QZX FRIENDS

KI4HF -- Pete renewed after a space of about one year and requested all the back issues missed.

AB5L -- Michael is a new subscriber who has a T/S 2068, T/S 1000, and a 2040 printer.

WB3JDP -- Hal renewed and said that he was not on packet yet. He has all the issues of QZX on file ready for reference wherever his interests take him.

UNCLASSIFIED ADS

WANTED: UNCLASSIFIED ADS for publication in QZX. Cost is 1 cent for each keystroke (characters, blanks, etc.). Payment must be included with order. This is an excellent way to sell your program or unwanted equipment, ask for help, or find a specific program. Send your ad with payment to QZX, 2025 O'Donnell, Las Cruces, NM 88001.

FOR SALE: Index to QZX consisting of a book of xerox copies of all the covers since December 1982. Send $5.00 plus $1.00 shipping and handling ($2.00 if to a non-US address) to QZX.

WANTED: Documentation for Byte-Back Co. M-64 memory board. Ed Radtke, 1602 Woodluck Ave., Louisville, KY 40205.

FOR SALE: Book ZX81 BASIC Book by Robin Norman. Paperback 190 pages. Originally $12.95 now $6.00 postpaid in US. Simple and clear introduction to ZX81 BASIC. Alex. F. Burr, K5XY, 2025 O'Donnell, Las Cruces, NM 88001.

WANTED: ZX-81 Thermal Printer uses silver coated paper - not the 2040 printer. Ed Radtke, 1602 Woodluck Ave., Louisville, KY 40205.

FOR SALE: CTM Magazines many with Sinclair articles. From December 1985 to June 1988 (two issues missing). $5.00 plus $3.00 postage. Alex. F. Burr, K5XY, 2025 O'Donnell, Las Cruces, NM 88001.

FOR SALE: Book The Basic Guide to VHF HF by Edward M. Knoll, W3FQJ. p. 80. See Dec '87 QZX. Originally $7.98, now $5.00 postpaid. Alex. F. Burr, K5XY, 2025 O'Donnell, Las Cruces, NM

QZX Discount: 15% discount on all orders mentioning QZX. T & C Services (address in ad this issue.)

SNUG
K5XY

S.N.U.G. stands for Sinclair Northamerica Users Group. There has been much discussion among Sinclair users about the need and utility of such a group. The consensus seems to be that the idea is worth a try.

Information gleaned from a recent news release shows that the stated purpose is to act as facilitator between user groups and Sinclair users. They want to act as the single source to look to for information about Sinclair and to direct inquiries to the proper sources. To help accomplish this purpose the group would keep lists of

1. Sinclair orientated user groups
2. Current and active vendors
3. Names of Sinclair users
4. Programs in a Public Library
5. Newsletters and documents
6. Bugs and cures.

Dues would be $15 for user groups and $12 for individuals.

Members would be primarily user groups and those not associated with any user group.

The organizers say that they are not in competition with currently established user groups. The idea is to support these groups and not detract from them.

It is hoped that a quarterly publication will start in January with an annual update of users and user groups. Other issues could contain specific information on the organization and possibly an index of published Sinclair related articles during that quarter.

Long term goals include a forum of interested parties to lead to the standardization of hardware and software, making contact with and utilization of software bases in England and other parts of the globe, investigation of release into the public domain of information being held by authorized patent holders of Sinclair technology, and contact with former software houses and cottage industries to release their rights and interests in programs no longer on the current market.

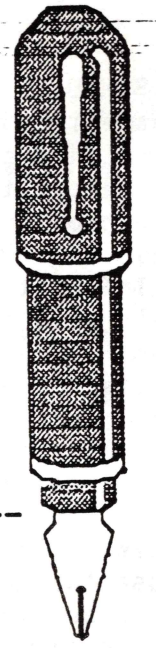
These are very ambitious undertakings and I think the organizers underestimate the work involved. However Sinclair users have long confounded the experts who predict that interest will soon evaporate.

The organizers proclaim that the first order of business will be to get a public domain software library up and running. They have had offers from some users groups and prominent individuals who are willing to donate their libraries. This in itself would be very useful to the Sinclair community and to QZX readers. Here would be a source for tapes (and disks) of long software programs which are very difficult to type into a computer from a printed list. It is however a very difficult task to run such a library by mail. The problem of difficult to load tapes is a very serious one. The effort will be very time consuming and will either cost a non-negligible amount or be dependent on the donation for a major amount of time. But the reward might be very great.

The organizers are well aware that some will suspect that the effort is Vaporware - here in words only. Therefore they have taken an innovative step. They plan to put all the initial dues into an escrow account and to return these monies if they do not acquire a membership list of at least 100 by the first of next year. They hope to have a membership list of 300 by June.

I cannot help but feel that the present national magazines and large user groups will view this group as competition despite their protestations to the contrary; but, if the public domain library lasts for a reasonable time, the effort will have been worth it. I wish them good luck.

Sinclair Users Unite!
Sign up for SNUG!



Sinclair/Timex Northamerican Users Group is being formed. It will provide all of us with a unified voice to vendors, the latest product info, a list of other members, and the largest library of Public Domain and Shareware software in the United States. For more information fill out the sheet below.

Name:_____ Phone: ( )

Address:_____

City:_____ State_____ Zip_____

Computer Equipment I own and peripherals are:_____

_____

_____

_____

I would( )would not( )be interested in having a quarterly newsletter.
I would( )would not( )be interested in working on or submitting items for the newletter. Here is a list of some of the programs I have done that might interest other people:_____

_____

_____

Products that I would like to see for my computer are:_____

_____

_____

I subscribe to the following computer related publications:_____

_____

_____

Other user groups I belong to are:_____

_____

_____ I've circled by local group.

I would( )would not( )like my name given to vendors at this and other computer fests for future mailings. Software I am interested in either Public Domain, Shareware or Commercial is:_____

_____

Mail to: SNUG 7515 Arbordale Dr. Port Richey, Fl. 34668

SATELLITE INFORMATION
WA6DLI

Now that Oscar-13 is up in the final orbit, QZX readers might wish to follow its activities on their computer screens. With the proper gear they may even want to join in the fun.

The minimum gear as I see it, if you build your own antennas, is an all-mode 2 meter rig (sats are on SSB/CW on uplinks). Some like Oscar 11 and 9 send on FM so any 2 meter rig can receive some. With a 2 meter all-mode rig and a converter for your hf rig to receive 435.0-436.0 MHz you can operate mode J. The simplest way to operate mode B was with the Ten-Tec 2510 Satellite station which was a 435.0-435.5 MHz transmitter with a tracking 2 meter converter for the HF rig which made a pseudo-transceiver. The only fly in the ointment was that the new Oscar 13 moved mode B up so the range of the Ten-Tec is not quite right. I have been able to get the transmitter to reach the ssb portion of mode B but of course have to listen on the 2 meter rig and not use the Ten-Tecs receiver converter.

Such is progress. I have written to Ten-Tec to see when the promised (in the instruction book) upgrade will be available to move its operating range into the Oscar 13 mode B area.

Oh yes, you will need some way to elevate as well as rotate your antennas. Background on all this is best obtained by writing Amsat (P.O. Box 27, Washington, DC) or the ARRL Satellite Handbook.

Another 'hobby' is just observing the bigger satellites with naked eye or binoculars. Best if you live away from big city light pollution. For this activity you can subscribe to the ASO Newsletter (Amateur Satellite Observers) by Jim Hale, HCR 65, Box 261-B, Kingston, ARK. 72742. It is about $25 a year but write Jim for the current rate. He has a 6 months rate of $14.

For any of this you will need a satellite tracking program for your Timex Sinclair. QZX in the past has published the VR-85 program of W6WNK in a form for the 2068 and TS-1000.

If there is interest from Alex and the readers I have permission to publish in QZX, a fine satellite program with a world map, time clock, schedule printout, and path plotting on the map with QTH blinking as well as the satellite. Also with parameters for aiming antennas, viewing etc. This program is called Sat-Bahn (German for Sat-Track) . DG7FAE, Rainer Steinbrecher is the author in Germany.

The program was written for the Spectrum but works fine on the TS-2068. If the machine language is too difficult to publish (i.e. type in without error from QZX), then I may be able to work out the furnishing of a tape and cost for cassette, postage and handling, and perhaps a royalty for Rainer...say $10.

This would be for the TS-2068 or Spectrum only. The program has menus and allows WX sats, ham-sats, the Russian space station MIR, and anything else. Of course, the series by Guillermo, has told you

how to build an antenna tracker, clock, and controls for your rotator for the TS-1000/1500 or ZX-81 computers. The earlier VR-85 could be modified to use his controller by adding the relavant lines after the main program has calculated the sats elevation and azimuth.

For those you have the QZX earlier sat program VR-85 (now an upgraded Commodore program by W6AMW and W6WNK), you may wish to enter the parameters for Oscar 13 in its final orbit. These obtained July 11 by the NORAD radars and put out on the AMSAT nets by Phil Karn.

Oscar-13 Keplerian parameters:
Name: Oscar-13 (AO-13)
Catalog No. 19216
Epoch Time: 1988 193.90000000
(Monday July 11 21:36:00.0 1988 UTC)
Element set: mh7-12
Inclination: 57.6540 deg.
RA of Node: 247.5380 deg. (RAAN)
Arg. of Perigee: 187.2210 deg.
Mean Anomoly: 357.2170
Mean Motion: 2.09697960 rev/day
Decay rate: 0.0 rev/day
Orbit No. 57

That should be enough parameters to upgrade your earlier program. The Amsat/ARRL bulletins from W1AW and the packet BBS give new parameters for the WX Sats, Manned Sats, and Ham sats on a regular basis as soon as they are obtained from NORAD or other observers.

Jim Hale's ASO Newsletter gives about 80 parameters each month for the rockets, sats, and larger pieces of space junk that are visible to the eye or with low power binoculars. Jim publishes the newsletter with a Timex TS-1000 or a TS-2068 running on solar power. He has his whole QTH on solar as he lives with his family on a mountain top without commercial power. He is working to get his ham license. His newsletter was reprinted in CTM, until the demise of that fine mag in June of this year.

For those with QL's there is a satellite program by Ian GM4IHJ, available from the British equivalent of QZX, the SARUG newsletter by Paul, who recently defended the Queen in the pages of QZX. It is on microdrive for a price that is donated to AMSAT-UK. It is quite elaborate, but was not upgraded from the Spectrum version with the detail that the QL would have permitted on the maps.

I was able to make a few contacts on Oscar 10 after I got my act together. This was using the Ten-Tec 2510. By the time you read this Oscar 10 will be in such a poor angle for the solar panels to charge, that it will not be available for use. I am monitoring Oscar 13 on an old TS-700A Kenwood all mode 2 meter rig without preamp and heard PA0JOB in Holland as loud as I have ever heard a signal from Europe. As soon as I get my Ten Tec 2510 upgrade board, I will be able to properly work Oscar 13. In the meantime I am trying to transmit on the 2510 at the limit of its knob which is 435.489 and that puts me in the most used portion of the SSB downlink at 145.900-.910 area. I am

having some trouble with feedback into the microphone circuit at the moment. Soon I will have the TS-1000 or 1500 controlling the rotator with the Neil Hill interface I got last year. (I was chicken and didn't invest in antennas/rotator until Oscar 13 was safely launched.) This seems to have been Ten-Tec's position on upgrading the 2510, as well. I wrote them a year ago and told them to be ready and got a non-commital reply from Jim Birchfield, the engineer.

My main interest in satellite, other than the thrill of being part of the space age directly, is to have a European path that is not subject to the band conditions. Perhaps I can work my old friend, Hans von Eckert, SM3HBQ who once advertised in these pages with the G1FTU software for RTTY/CW/SCTV for the Spectrum or Spectrum adapted TS-2068s. He is on satellite so will be nice to meet him on the air.

The first thing I discovered on my satellite adventure, is that satellite work is the ultimate QRP mode. A block buster signal is S-7 and most of the time hot signals are S-3. This means several things. Your local noise level better stay below S-3. On VHF-UHF, noise is not quite as bad as on HF, but was I surprised when I switched from the dead silence of FM to SSB. I had forgotten that even narrow band FM is quite noise free. Also in the Los Angeles area, I'm in one of the world's hottest environments for RF. We have 7 VHF TV stations, dozens of UHF TV stations, 34 AM stations, and about 45 FM commercial stations. Plus ham repeaters on all available bands and frequencies on the mountain tops around. Not to mention utilities on air.

This is the time to know and tell your FM simplex and packet friends to stay out of the satellite bands from 145.800 to 146.000 MHz. It is also the place to listen with what you have and perhaps be surprised. On FM at 145.825 +/- doppler you are quite likely to hear Oscar 11 come by on its 90 minute orbit saying ..."Attention! This is digitalker on AO-11, then give telemetry numbers in plain english, and then say.. See You Later 73 beep beep!" This is heard by schools in Europe and elsewhere.

The MIR astonauts are scanner monitored on FM with even hand helds around 143.000 MHz. My friend Dieter in Germany sends me copies of English MIRWATCH translations of the Mir conversations while on space walks (EVAs or extra vehicle activity). Seems they have the same problems as hams do, bolts that won't come loose, plugs that won't unscrew, etc. Jobs allowed 20 minutes took two hours. So such are the things you can do if you have a program to tell you where the satellites are at a given moment. QZX has provided you the means before from my previous submissions and the work of LU8MAD so you have no excuse.

If you are interested in the fine program by Rainer for the TS-2068 let Alex know and we will work out a way to provide it. BOB WA6DLI

USR KEY

ONE TOUCH...! FOR USR "TOKEN"

In your TS1000, to select a function, you first press SHIFT-ENTER giving you the F cursor. Then press the key for the function you want. Remember that the FUNCTION key is a prefix key: you use it before pressing the that has the symbol you want to display. This is different from the SHIFT key, wich you hold down while you press the other key.

USR function

Purpose of this function: branches to a machine language program. The USR function link a machine code program to a BASIC program. To select USR, you first press FUNCTION key (SHIFT-ENTER). Then press the L key.

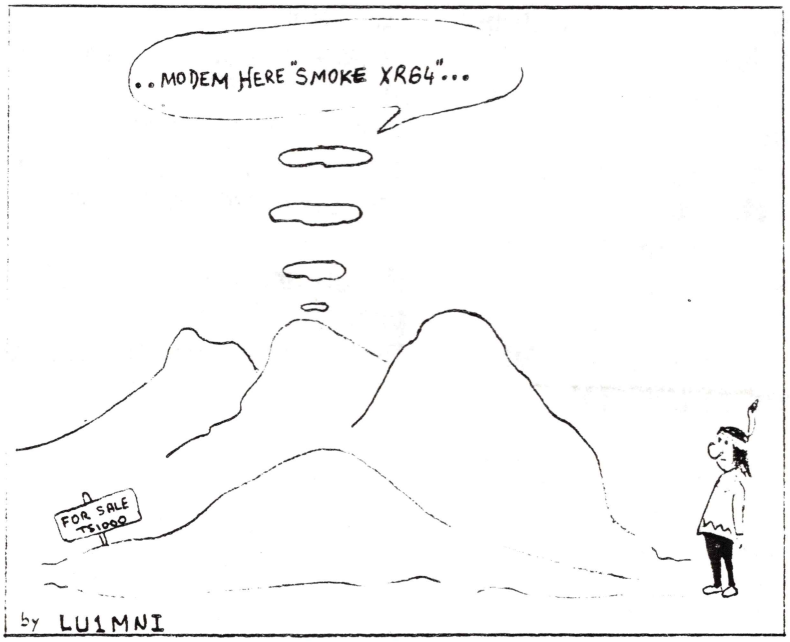
Summarily: you need press three key for USR function.
Now, with big keyboards as surplus TI (these keybeards contain 48 key) you can obtain a dedicate one touch USR key. And this key live...! when you press the USR key this make a beep sound!..
Beeper is available also with FUNCTION key but you can avoid sounds, this is optative.

I have made this improvement some years ago, until now work fine and is very useful.

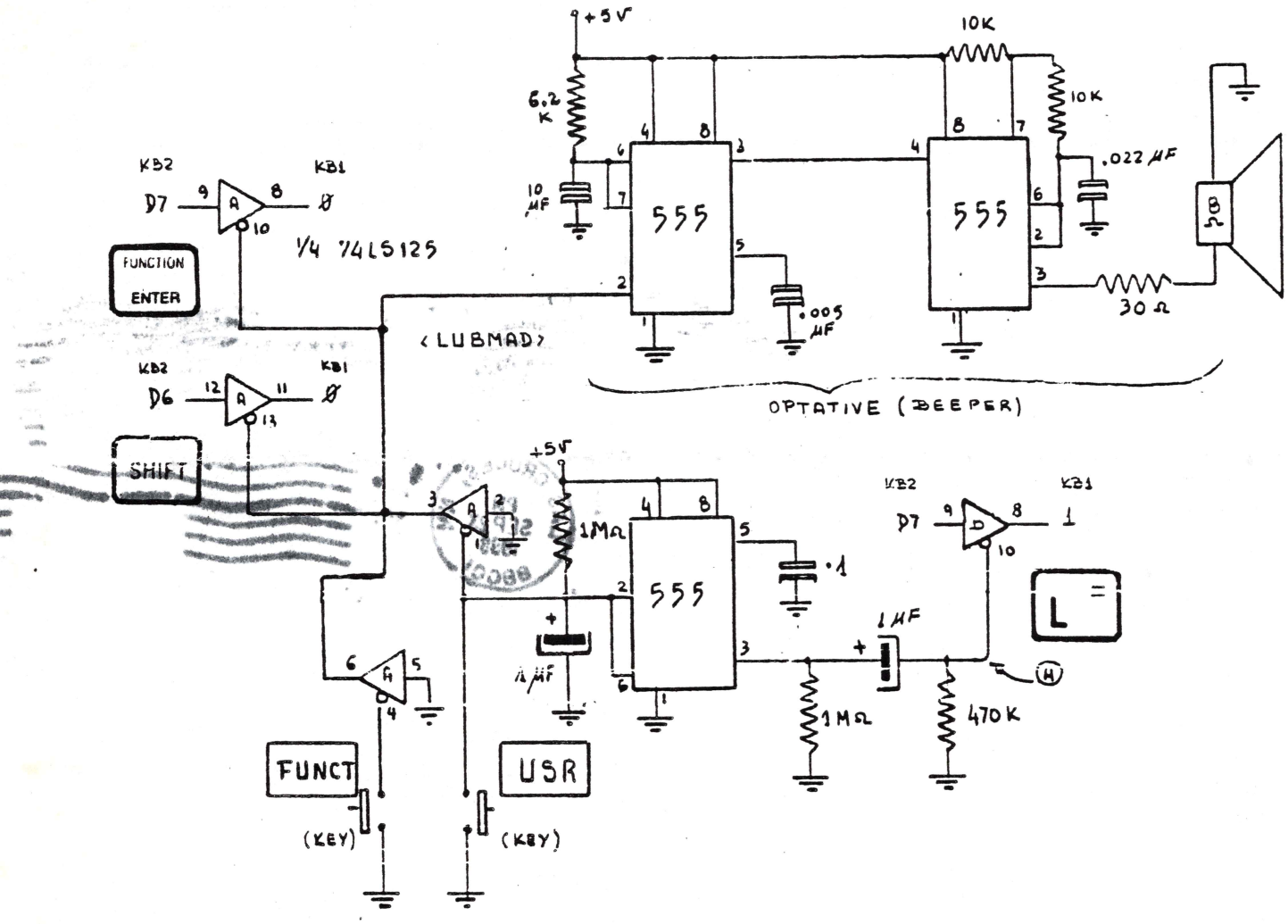
Give me a great job to find a device that send a negative pulse after delay of trigger (pressing key), but I have found a useful trick with the 555 timer IC, and this work..!

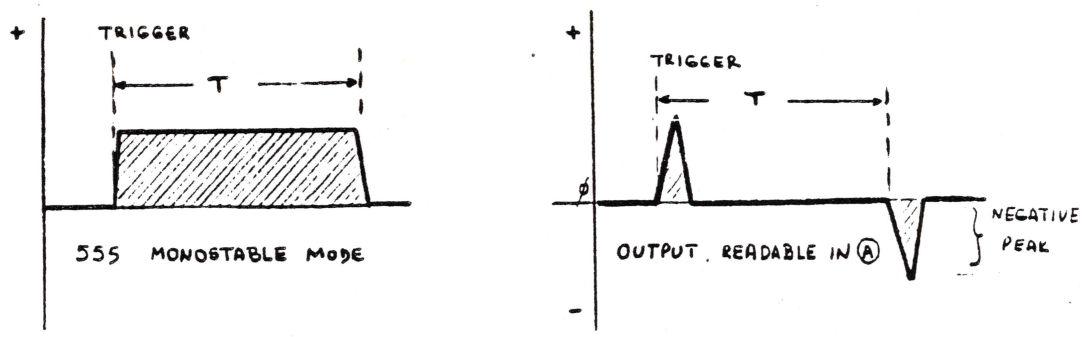
Refered to connection of key into a TI keyboard see my article in QZX April 1986 "USING EXTRA KEYS ON TI KEYBOARD".

73's ... Guillermo (LU8MAD)



ENTER
SHIFT
FUNCTION
USR
L





73, K5XY

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